April 23, 2020

Kira Lynch, Acting Unit Manager
U.S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 155, 12-D12-1
Seattle, Washington 98101-3140

**RE: East Waterway Operable Unit, Harbor Island Superfund Site – Seattle, WA**

Dear Ms. Lynch:

On behalf of the Port of Seattle, City of Seattle, and King County (collectively, the East Waterway Group or "EWG"), thank you for meeting with us on February 25, 2020, regarding the status of the Proposed Plan for the cleanup of the Harbor Island Superfund Site's East Waterway Operable Unit ("East Waterway" or "Site"). We also received the letters from Chris Hladick in response to the Port and County letters on April 15, 2020. We appreciate the time EPA has taken to understand our concerns regarding the Site remedy, in particular, your acknowledgment that the cleanup will not achieve natural background standards under any scenario and that it should not necessarily mirror the regulatory trajectory of the upstream Lower Duwamish Waterway Site.

At your request, we are providing feedback on the remedy options you identified, namely (1) an interim record of decision ("ROD") identifying final active remediation requirements (absent changes of the sort that would trigger "re-opener" provisions in a consent decree), with a final ROD following development of anthropogenic background cleanup levels; or (2) a final ROD retaining natural background cleanup levels until anthropogenic background levels can be substituted in through an explanation of significant difference ("ESD") or ROD amendment.

Although we appreciate EPA's efforts to address the Site, the revised remedy options identified by EPA Region 10 do not reflect the basic circumstances and limitations that are applicable for the Site. Remedial options must be evaluated in the complete context of this complex and well-studied site. The feasibility study ("FS") demonstrates that every feasible alternative will still leave contamination in place in areas where removal or capping is not feasible. EPA has already accepted that the Site remedy will necessarily leave in place this inventory of contaminated sediments. Based on this and other unique Site characteristics, a final ROD that includes an up-front technical impracticability ("TI") waiver of unachievable Washington State sediment cleanup standards is the only reasonable and clear path to finality, achievability, and transparency, and we renew our request that EPA include a waiver in the forthcoming Proposed Plan.

We encourage EPA to review our prior correspondence on this matter,[1] as this letter will focus on the issues raised at our February meeting, specifically, that (1) a TI waiver does not require a substitute numeric standard; (2) an interim ROD is not a practical solution; and (3) a final ROD retaining natural-background-based levels remains unreasonable.

[1] *See* Port of Seattle letter to C. Hladick on August 6, 2019; King County letter to C. Hladick on August 12, 2019; and Port of Seattle letter to P. Wright on January 9, 2020, and their respective attachments.

## I. A TI waiver does not require a replacement numeric standard.

We have heard EPA assert that it is legally precluded from waiving a numeric cleanup level without substituting a replacement value. There is no such requirement in the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") or the National Contingency Plan ("NCP"), and EPA has previously waived standards in CERCLA RODs without identifying replacement standards, including in Region 10.[2] We disagree with EPA counsel's analysis suggesting that NCP provisions create such a requirement, and provide the enclosed memorandum directed to Associate Regional Counsel Richard Mednick.

A TI waiver without replacement standards is unquestionably the most efficient and transparent approach. If EPA nonetheless desires to select replacement numeric cleanup levels for the waived Applicable or Relevant and Appropriate Requirement in the ROD, it could select the numbers already determined through extensive EPA-directed modeling to be the most probable outcome of the selected remedy: in the case of polychlorinated biphenyls ("PCBs"), 57 µg/kg is the best estimate of the long-term post-cleanup spatially-weighted average concentration.[3] If future monitoring shows that a different value is more likely following decades of source control and natural recovery, that substitute value could be adopted through an ESD or ROD amendment. Including an up-front TI waiver will not affect the remedy's scope of active remediation or the degree of risk reduction.[4]

## II. An interim ROD is not a practical solution and will not adequately address the EWG's concerns.

At our February 25 meeting, we heard that EPA's preferred option is an interim ROD that would essentially be final but for the development of anthropogenic background levels to later be substituted for unachievable natural background standards in a future, final ROD. This approach would simply replace one unachievable standard with another where, per EPA guidance, the calculation of anthropogenic background is limited to consideration of only future upstream and lateral inputs.[5] Remaining inventory of contaminated sediments, which will mix with new inputs due to vessel traffic and Site hydrodynamics, ensures that an average site-wide PCB concentration equivalent to that of incoming materials simply cannot be achieved. A cleanup level that does not consider these important characteristics and limitations of the Site will simply not be achievable, and would create the same problems around transparency and risk to public potentially responsible parties as natural background cleanup levels.

Similarly, an interim ROD lacking an unequivocal statement that no additional active remediation is expected for the final ROD would not address the EWG's concerns. Any ROD

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[2] For example, at the Lockheed West site in Seattle, the 2013 ROD waived the federal ambient water quality standard for arsenic without providing a substitute standard. At the Eielson Air Force Base site in Alaska, ROD amendments in 1998 waived the federal Safe Drinking Water Act standard for lead in groundwater within a specified TI zone without supplying a replacement numerical standard for that area. At the Hudson River and Grasse River sites in New York, RODs in 2002 and 2013 (respectively) waived state PCB water quality standards without supplying replacement numerical levels.

[3] *See* Section 9 of the Feasibility Study for a discussion of relevant outcomes of remedial alternatives.

[4] Choosing a replacement value will add no additional protectiveness to the remedy. Following completion of active remediation, all further reductions in concentrations and risk occur through natural recovery and source control measures that will all occur under other programs whether or not a replacement value is determined. *See* enclosed technical memo from EWG to Kira Lynch for details.

[5] *See* EPA, *Role of Background in the CERCLA Cleanup Program*, April 26, 2002, OSWER 9285.6-07P, at 5.

must be clear that the required active remediation represents all practicable measures that will meaningfully reduce Site contamination and risk to human health, and that no additional active remedial measures will be undertaken if all initial requirements are met. The example that EPA provided, a 2009 interim ROD from Commencement Bay, does not address this problem. Instead, it specifically includes a process to evaluate whether *additional* active remediation would be required at some undefined future point; this is a far cry from the certainty the EWG needs in order to invest hundreds of millions of public taxpayer dollars in a cleanup.

## III. A final ROD retaining natural-background-based levels is unreasonable.

The second option that EPA offered—a final ROD with natural-background-based cleanup levels to be revised at a later date—is also not acceptable because of the concerns we have previously identified with the lack of transparency, the lack of finality, and the risk to public potentially responsible parties documented in our prior letters and meetings. Natural background levels are simply unachievable at this urban site. A "final" ROD that includes unachievable standards will invariably mislead the public and create an unacceptable degree of risk for implementing parties, even if a process for developing a substitute level is underway.

For the many reasons stated above and in our prior correspondence, a final ROD that includes a TI waiver with no replacement standard is the best approach for this unique site. It will not change the substantive nature of the cleanup—the same amount of material will be removed and the same risk reduction will be achieved. As public agencies, it is our stewardship responsibility to ensure that we perform cleanup only once for the Site, and that we perform it well. With this approach, we anticipate that the Site can progress swiftly to remedy implementation and stand out as an illustration of EPA's success in expediting site cleanups.

Thank you for your continued consideration of our concerns, and we look forward to working with you as we move forward towards a final cleanup.

Best regards,

Kathy Bahnick (Apr 23, 2020)

Port of Seattle

Kathy Bahnick
Senior Manager, Environmental Programs

Jim Bolger

King County

James Bolger
Section Manager, King County Wastewater Treatment Division

David Schuchardt
David Schuchardt (Apr 23, 2020)

City of Seattle

David Schuchardt
Sediment Program Manager

cc:
Chris Hladick, EPA
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Debra Williston, King County
Jeff Stern, King County
Kristie Elliott, King County
Mark Isaacson, King County
Brick Spangler, Port of Seattle
Elizabeth Black, Port of Seattle

# MEMORANDUM

**DATE:** April 23, 2020

**TO:** Richard Mednick, Associate Regional Counsel, U.S. EPA

**FROM:** Elizabeth Black, Senior Port Counsel, Port of Seattle
Kristie Elliott, Senior Deputy Prosecuting Attorney, King County
Laura Wishik, Director, Environmental Protection Section, Seattle City Attorney's Office

**SUBJECT:** Harbor Island Superfund Site/East Waterway Operable Unit: EPA has the authority under CERCLA to waive an ARAR in a final record of decision without including a replacement numeric standard, provided the remedy is protective of human health and the environment

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We collectively represent the East Waterway Group ("EWG"), comprising the City of Seattle, King County, and Port of Seattle. This memorandum responds to your email to Tom Newlon on February 25, 2020, and explains the legal basis for our contrary conclusion that neither CERCLA nor the NCP requires a replacement numeric standard as a prerequisite for waiving an ARAR.[1] Your email expressed your interpretation that a numeric cleanup level is required in a record of decision based on a combination of regulatory provisions: 40 C.F.R. § 300.430(f); 40 C.F.R. § 300.430(f)(1)(i); 40 C.F.R. § 300.430(e); 40 C.F.R. § 300.430(e)(9)(iii)(A); and 40 C.F.R. § 300.430(e)(2)(i). We respectfully disagree.

CERCLA and the NCP set forth the bases for the various waivers identified in the statute and the conditions that must be met for EPA to waive an ARAR in the remedy selection process. *See* 42 U.S.C. § 9621(d)(4)(C); 40 C.F.R. § 300.430(f)(1)(ii)(C). Nowhere in these provisions is there any mention of a requirement for a replacement numeric standard. EPA Region 10's position to the contrary is inconsistent with the plain language of the NCP, EPA guidance, and past EPA practice.

## I. The NCP does not require a replacement numeric standard for a waived ARAR.

Region 10 has asserted that NCP provisions detailing one method for assessing remedial alternatives in a feasibility study (under 40 C.F.R. § 300.430(e)) should be read as constraining EPA's authority to waive ARARs in the context of the separate, post-feasibility study remedy selection process provided for in 40 C.F.R. § 300.430(f). As we understand it, Region 10's argument is as follows:

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[1] This memorandum incorporates several commonly used acronyms: CERCLA, the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq*; NCP, the National Contingency Plan, 40 C.F.R. Part 300; ARAR, applicable or relevant and appropriate requirements addressed in section 121(d) of CERCLA; and PCBs, polychlorinated biphenyls.

- 40 C.F.R. § 300.430(f)(1)(i) (regarding remedy selection) states that the nine criteria first identified in -.430(e)(9)(iii) (regarding the feasibility study) are to be used to select a remedy;

- Subsection -430(e)(9)(iii)(A) ("overall protection of human health and the environment," criterion #1 of 9) states that, as a first step in assessing whether alternatives are "overall protective," alternatives shall be assessed as to whether they "adequately protect . . . from unacceptable risks . . . by eliminating, reducing, or controlling exposures to levels established during development of remediation goals consistent with 40 C.F.R. § 300.430(e)(2)(i);"

    - Subsection -430(e)(2)(i) (establishing remediation goals in the feasibility study) states that remediation goals shall establish "acceptable exposure *levels* that are protective."

We interpret from EPA's analysis a suggestion that whenever a preliminary remediation goal (which is a "level" based on ARARs and other criteria) is established in a feasibility study, there must always be a corresponding final remedial goal (i.e., a "cleanup level") in the selected remedy, even when the remedy includes a waiver of the ARAR in question. For a typical Superfund site that does not require ARAR waivers, EPA refines preliminary remediation goals from a feasibility study into cleanup levels in a record of decision. EPA is not legally required, however, to include a replacement value in all cases when an ARAR is waived because it cannot practicably be achieved. EPA Region 10's position that EPA lacks the authority to waive an unachievable ARAR without providing a replacement value, even when the selected remedy is protective, is inconsistent with the structure and plain language of the NCP.

A. <u>EPA Region 10's interpretation is contrary to the structure and plain language of the NCP.</u>

The NCP lays out a stepwise process for investigating site contamination, developing and evaluating remedial alternatives in a feasibility study, and then selecting a site remedy. Region 10's interpretation is contrary to the process defined in the NCP because it assumes that one required element of feasibility study evaluations trumps other feasibility study requirements *and also* carries over and constrains the subsequent process of selecting a remedy.[2] Although Region 10 correctly identified one requirement for feasibility study evaluations of remedy alternatives, review of the NCP text related to feasibility study analyses and remedy selection demonstrates that Region 10 is misreading the NCP.

The NCP requires that feasibility study analyses of alternatives consider the same nine evaluation criteria as used for remedy selection. The NCP text addressing the first of those criteria (overall protection of human health and the environment) reads in full:

[2] The NCP has very specific requirements for each step in the CERCLA process; when there are limitations on EPA's decision-making, or other obligations that apply to a particular step in the process, they are specified. There is no room for imputing a requirement from one step in the process (evaluations of alternatives) into a fundamentally different step in the process (selection of a protective site remedy).

> Overall protection of human health and the environment. Alternatives shall be assessed to determine whether they can adequately protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by hazardous substances, pollutants, or contaminants present at the site by eliminating, reducing, or controlling exposures to levels established during development of remediation goals consistent with § 300.430(e)(2)(i). Overall protection of human health and the environment draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

40 C.F.R. § 300.430(e)(9)(iii)(A).

The NCP text clearly calls for a two-step process where EPA first determines whether remedial alternatives will meet protective values (exposure levels) established in the development of site preliminary remediation goals under subsection -430(e)(2)(i). EPA then must go on to assess the overall protectiveness of remedial alternatives by "draw[ing] on . . . other evaluation criteria," including criteria other than "compliance with ARARs." "Overall protectiveness" does not depend on or require a particular number.[3] Region 10's argument misses the mark when it asserts that one element of alternative evaluations during the feasibility study creates a requirement that is applicable to ARAR waivers in the subsequent remedy selection process. Even in the context of comparing remedial alternatives, EPA's protectiveness determination is not limited to evaluating whether the alternatives reduce exposures to preliminary remediation goal "levels."

Moving from the feasibility study into the remedy selection process, EPA must choose a remedy that (1) meets the two CERCLA remedy selection threshold criteria (overall protection of human health and the environment,[4] and meeting or waiving ARARs) and (2) considers the remaining seven balancing and modifying criteria as specified in the NCP.

40 C.F.R. § 300.430(f)(1)(i).

Protectiveness could be achieved by meeting all cleanup levels derived from preliminary remediation goals based on the various site ARARs. However, when feasibility study analyses demonstrate that overall protection cannot be achieved by implementing remedial measures that result in all ARAR-based preliminary remediation goals being met within a reasonable time frame, EPA can nonetheless rely on tools such as institutional controls and source control to achieve further reductions, limit exposures, and thereby achieve a sufficient degree of protection.

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[3] Whether contaminant levels identified as protective will be met is a required first step in that analysis, but only a first step. If the answer is yes, then the alternative will presumably result in a protective remedy. If the answer is no, the remedy might still achieve overall protectiveness, as would be required for an alternative to be selected as the final remedy. However, choosing a higher (and therefore non-protective) replacement value to substitute for a protective level that cannot be achieved is not required and is not how overall protectiveness is demonstrated.

[4] It is this provision that EPA Region 10 relies on to impute, as a specific constraint on all of subsection -430(f), that ARAR waivers require numeric replacement standards because part of criterion #1 of 9 calls for assessing alternatives with recourse to preliminary remediation goal levels. But the criterion to be used for remedy selection is, quite clearly, "overall protection." The criterion is not a specific requirement that all remedies must have a final cleanup level for every preliminary remediation goal, nor does it implicitly create such a requirement for remedy selection. EPA Region 10's position requires this logical leap, but it is unsupported by the language and structure of the NCP.

Relying on tools in addition to meeting numeric standards is exactly what EPA will do in selecting a protective remedy for the East Waterway, because *none* of the alternatives can achieve an acceptable degree of overall protection by meeting all applicable human health cleanup levels. As authorized by the NCP, EPA will rely on a combination of tools, including active remediation, institutional controls, and source control, to achieve a protective remedy.[5] Selection of a replacement value for an ARAR that should be waived makes no substantive difference in the remedy selection process.

In sum, the plain language of the NCP makes clear that its requirement that alternatives be evaluated based on comparisons to preliminary remediation goal "levels" in no way compels the conclusion that ARARs may only be waived if numeric replacement values are chosen in the subsequent remedy selection process governed by 40 C.F.R. § 300.430(f).

B. Reading feasibility study requirements into the remedy selection process produces absurd results.

Following Region 10's logic, if the referenced portions of subsection -430(e) were to be read into the entirety of subsection -430(f), they would necessarily apply to all six of the waivers in 40 C.F.R. § 300.430(f)(1)(ii)(C). That would produce the absurd result that replacement numeric standards would be required for ARARs waived because, for example, the state does not consistently apply them (subsection -(C)(5)), or because attempting to meet them would do more harm than good to human health or the environment (subsection -(C)(2)).[6]

Where EPA has invoked other waivers under subsection (C)—e.g., the "more harm than good" waiver—EPA has not provided a replacement numeric standard. For example, at the New Bedford Harbor site (Operable Unit 1) in Massachusetts, EPA's 1998 record of decision waived a PCB fish tissue ARAR that would have resulted in a target sediment cleanup level for PCBs so low that the requisite dredging would have resulted in more harm than good to the environment. EPA did not supply a replacement numeric fish tissue level for the waived ARAR; EPA simply waived it, demonstrating that EPA does not consider the identification of replacement values as a prerequisite for waiving an ARAR.

The only reasonable interpretation of the NCP is that subsection (e) (feasibility study) governs exactly what it says it governs—feasibility studies—but does not govern the subsequent process

[5] EPA has addressed these circumstances at other sites, where final records of decision concluded that none of the considered feasibility study alternatives would meet certain ARARs. Those records of decision waived the unachievable ARARs based on technical impracticability *without* supplying a numeric replacement standard, and immediately followed the discussion of waiver with a discussion of how the remedy was nonetheless protective based on institutional controls and source control. *See, e.g.*, Hudson River OU-2 record of decision (2002) at 77; Grasse River record of decision (2013) at 55-56; *see also* New Bedford Harbor OU-1 record of decision (1998) at 35-36 (issuing "more harm than good" waiver without numeric replacement standard but concluding that the remedy would be protective in light of institutional controls). In light of this precedent, which is consistent with CERCLA and the NCP, it is unclear why EPA has apparently determined that it cannot do the same with respect to the East Waterway site.

[6] If EPA were required to supply a replacement standard when issuing a "more harm than good" waiver, what would govern selection of that replacement: equal harm and good, slightly more good than harm? How much more good than harm would be required, and why? The absurdity of this exercise is apparent.

of determining whether site ARARs will be waived in the context of the subsection (f) remedy selection process.

## II. EPA guidance contemplates that a waiver may be issued without a replacement numeric standard.

EPA Region 10's position that a replacement numeric standard is a prerequisite for every waiver is inconsistent with EPA's own guidance, which states that "in cases where there is a high degree of certainty that cleanup levels cannot be achieved, a final record of decision that invokes a TI ARAR waiver and establishes an alternative remedial strategy may be the most appropriate option." EPA, Guidance for Evaluating the Technical Impracticability of Ground-Water Restoration, OSWER Publication 9234.2-25 (Sept. 1993) at 5 ("Guidance").

The Guidance further calls for an "alternative remedial strategy," not a specific numeric replacement level for the waived ARAR. The Guidance states that the "alternative remedial strategy" should be incorporated into a final record of decision (*see id.* at 19), and should be "technically practicable, protective of human health and the environment, and [must] satisf[y] the statutory and regulatory requirements of the Superfund or RCRA programs, as appropriate." *Id*.

An "alternative remedial strategy" may include "exposure controls" (including institutional controls) and "source control." *Id.* Although the Guidance acknowledges that at certain sites it "may be feasible" to remediate to a less stringent site-specific cleanup level, it does not state that that this must be done, or that this is the only option for a viable alternative remedial strategy. *Id.* at 20. Instead, although "site-specific cleanup levels offer the advantage of providing a clear goal against which to measure the progress of the alternative remedial strategy," it may be that site-specific cleanup levels exceed acceptable risk ranges for human or environmental exposure, such that the alternative remedial strategy "must include other measures (e.g., institutional controls) to ensure protectiveness." *Id.* Again, an alternative remedial strategy is not reducible to, nor necessarily dependent on, a replacement number in all cases. As long as the alternative remedial strategy demonstrates how it is "protective of human health," a cleanup level is not needed.

There is no dispute that the East Waterway is a site where "there is a high degree of certainty that cleanup levels cannot be achieved." Following the plain language of the Guidance, it is clearly contemplated that in this case a final record of decision invoking a technical impracticability waiver may be the most appropriate option.[7]

[7] Although the Guidance was developed for groundwater sites, it is the most relevant EPA guidance available regarding waivers, and the principles apply equally to sediment sites. For example, the Guidance notes that at some groundwater sites (e.g., where pump-and-treat systems are continuously operating, and the question is when to stop that ongoing treatment), it is appropriate to wait until reaching an "asymptotic concentration level" before issuing a TI waiver. A sediment site like the East Waterway is obviously distinguishable, insofar as there is no ongoing active treatment system akin to pump-and-treat systems for groundwater, where the issue is when to discontinue ongoing treatment. Instead, the maximum active remediation that is practicable, including extensive removal of contaminated sediments, will be applied to the site at the outset. Over the course of many decades, which will include ongoing source control under other programs, the site will eventually equilibrate to whatever sediment PCB concentration is ultimately achievable. Although groundwater sites are distinguishable in this regard, the Guidance nonetheless advises that an up-front waiver in a final record of decision may be the most appropriate option where there is a high degree of certainty that cleanup levels cannot be achieved.

The Guidance specifically addresses cases where an unachievable ARAR is waived, but a less stringent ARAR for the same substance in the same medium will remain part of the remedy after the waiver. *Id.* In those cases, the Guidance states that the next most stringent ARAR must be attained. *Id.* This is precisely what EPA has done at other Superfund sediment sites, including the Hudson River, where the 2002 record of decision waived three out of seven state PCB water quality standards, did not provide specific replacement levels for those waived ARARs, and instead simply called for attaining the four remaining less stringent state standards.

Likewise, for the East Waterway, another, less stringent ARAR for PCBs in sediment (the benthic sediment cleanup objective, which also functions as the PCB remedial action level) will remain part of the remedy after waiving the unachievable natural background standard. Importantly, the remaining ARAR and its associated remedial action level will result in the same degree of active remediation with respect to PCBs in sediment, and will achieve the same degree of risk reduction, whether or not there is a replacement value identified for the unachievable ARAR. As noted in the accompanying technical memorandum from the EWG to Kira Lynch, performance measures can be built into the record of decision without the need for a cleanup level, in order to demonstrate the selected remedy meets the remedy objective.

## III. EPA's past practice includes waivers without replacement numeric standards.

EPA Region 10's position that no numeric ARAR can be waived without a replacement numeric standard at the time of waiver is inconsistent with examples of final records of decision, including in Region 10. For example, at the Lockheed West site in Seattle (Region 10), the 2013 record of decision waived the federal ambient water quality standard for arsenic without providing a substitute standard. At the Eielson Air Force Base site in Alaska (Region 10), record of decision amendments in 1998 waived the federal Safe Drinking Water Act standard for lead in groundwater within a specified zone without supplying a replacement numeric standard for that area. And at the Hudson River and Grasse River sites in New York, records of decision in 2002 and 2013 waived state PCB water quality standards without supplying replacement numeric levels for those waived state ARARs.

EPA's past practice consistently indicates that there is no legal requirement that a replacement numeric cleanup level be selected in conjunction with ARAR waivers, and there is ample precedent that EPA can proceed without one. The only likely reason that sediment cleanup standards have not been waived in other states is that no other state has requirements akin to the Washington Sediment Management Standards that are at issue here.

## CONCLUSION

EPA's statutory, regulatory, and guidance authorities are clear on their face that no replacement numeric standard for a waived state ARAR standard is required at any site. Region 10's position that a replacement standard must be developed for the East Waterway lacks particular import for the Site, too, given that the same amount of active remediation will be conducted, the same amount of risk reduction will be achieved in the short and long terms, and extensive source control will continue regardless of waiving an unachievable ARAR. Whatever sediment PCB concentration is attained in the long term will be the achievable level, even though we will not know that value until at least the latter part of this century.

Consistent with the EPA Superfund Task Force recommendations, EPA's remedy decision should rely on state and federal implementation of other regulatory programs responsible for source control rather than a lengthy process to select a replacement value that will not change the degree of risk reduction following completion of active remediation. Leaving an unachievable cleanup level in place will provide no incremental environmental or human health benefit, and will instead result in the East Waterway becoming a "forever" Superfund site —contrary to the goals and recommendations of the Superfund Task Force. The NCP does not compel such a result, nor should EPA impose such a result.

The decision to include a waiver in a final record of decision need not delay the remedial process. The evaluation to justify a waiver is essentially complete, as set forth in Section 9 and Appendix A of the Feasibility Study for the Site. EPA has now acknowledged that no practicable remedy alternative will achieve natural-background-based cleanup levels, particularly for PCBs. The "alternative remedial strategy" that the Guidance calls for has essentially already been developed through years of feasibility study analysis demonstrating the need for institutional controls to achieve a protective remedy. With these elements already in place, EPA can be transparent with the public while proceeding without delay on a remedy that will include all practicable active remedial actions that provide meaningful incremental reductions to risks to human health and the environment for the East Waterway.

# MEMORANDUM

**DATE:** April 23, 2020

**TO:** Kira Lynch, Acting Unit Manager, EPA Region 10

**FROM:** East Waterway Group (Port of Seattle, City of Seattle, King County)

**SUBJECT:** Harbor Island Superfund Site/East Waterway Operable Unit: Detailed Discussion of Remedy Issues

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This memorandum presents the specific concerns with the two options EPA presented at the February 25, 2020, meeting with the East Waterway Group ("EWG"), as requested by EPA at the meeting. By necessity, these responses are somewhat duplicative with points already made, but the EWG wanted to have all of the issues with EPA's two options set forth in one place.

## I. EPA Option 1: Interim record of decision with no cleanup levels based on natural background

This option entails issuing an interim record of decision ("ROD") that would essentially be final but for the development of an anthropogenic background level that could be adopted in lieu of the unachievable natural-background-based cleanup levels for polychlorinated biphenyls ("PCBs"), dioxins/furans, and arsenic in a future, final ROD. We understand that EPA is attempting to address the issue of having unattainable cleanup levels and attempting to be more transparent with the public by acknowledging that natural-background-based levels will not be achieved for PCBs, dioxins/furans, and arsenic. We understand and appreciate that EPA is intending to mitigate the risk that the remedy would be viewed as a failure, even after spending hundreds of millions of dollars in public funds. Although we appreciate EPA's intention to be more transparent with the public and stakeholders, the use of an interim ROD is not the solution, is not necessary, and will not address the EWG's fundamental concerns. EPA has packaged proposed solutions to some, but by no means all, of the issues previously identified by the EWG (regarding EPA's original proposed approach to a remedy) into an interim ROD approach—which the three public entities had already stated they could not support.

A. **An interim ROD is not necessary.** We understand that EPA's change from focusing on a final ROD to consideration of an interim ROD is based on the assumption that EPA cannot issue a final ROD that includes an Applicable or Relevant and Appropriate Requirement ("ARAR") waiver without supplying a replacement numeric standard for the waived ARAR at that time. As noted in the legal memorandum accompanying this submission, we believe that assumption is incorrect (based on the language and structure of the National Contingency Plan, EPA guidance, and EPA's past practice at other sites). Accordingly, an interim ROD is not necessary. EPA can issue a final ROD that waives unachievable natural-background-based cleanup levels without supplying numeric replacements for those levels.

**B. Future uncertainty.** We expect that EPA's proposed East Waterway remedy will represent all practicable active remedial actions that provide meaningful incremental reductions to risks to human health and the environment. Interim RODs require an open-ended re-evaluation of the Site by future EPA staff not party to these deliberations to determine what further remedial action is necessary. In contrast, additional work can be required of parties that have implemented a final ROD under a consent decree only if the requirements of that ROD have not been fully met (e.g., remedial action levels have not been met in some locations) or in the unlikely event that a standard re-opener is triggered. Unquestionably, an interim ROD creates significant risks for implementing parties, and would give public potentially responsible parties ("PRPs") special cause for concern over their decision whether to enter into an order or decree to implement what may constitute an open-ended remedy.

As a case in point, the example interim ROD that EPA shared with the EWG, the 2009 ROD amendment for Commencement Bay – South Tacoma Channel Superfund Site, Operable Unit #1 ("2009 Commencement Bay ROD"), gives us significant concerns. There, the ROD called for interim remedial actions for groundwater, after which—at some indefinite point in the distant future—EPA (and Ecology) would evaluate whether *additional* active remediation would be required to achieve long-term objectives. Although the ROD acknowledged that additional active remediation may not be necessary, that possibility was limited to a potential contingency involving an EPA determination that monitored natural attenuation could achieve remediation objectives in a reasonable time frame and that active remedial measures could therefore be terminated. See 2009 Commencement Bay ROD, at 17-18. This is a far cry from clear statements in an interim ROD that the remedy decision is final except for the development of achievable cleanup levels.

**C. Perception as partial cleanup.** Without clear language in the ROD describing that the action is intended to be the final action and that no further action is expected, the public will still presume this is a partial remedy. The "interim" designation implies to the public, stakeholders, and future EPA staff that the selected remedy was a partial cleanup that was not sufficiently robust to be considered "final."

**D. Risk to public PRPs.** The public entities that make up the EWG—if they were to implement an interim remedy—would bear the risk that additional work would later be required, despite having committed to spend hundreds of millions of dollars on cleanup efforts. Although EPA could provide a covenant not to sue regarding the active cleanup as part of the consent decree for an interim ROD, that covenant would not apply to potential future cleanup actions, which remain a possibility with an interim ROD when new cleanup levels are calculated by EPA. The public entities that make up the EWG may not be able to sign up to implement an interim ROD considering the risk for potential future additional work and our obligation to use public funds responsibly.

**E. Anthropogenic background levels cannot be achieved.** We have concerns regarding EPA's proposal to develop and rely on anthropogenic background levels as replacements

for natural-background-based long-term cleanup levels (and as standards for assessing attainment of Remedial Action Objectives). Anthropogenic background levels for the Site would not result in achievable cleanup levels if, per EPA guidance, they were limited to consideration of only future upstream and lateral contaminant inputs. *See* EPA, *Role of Background in the CERCLA Cleanup Program*, April 26, 2002, OSWER 9285.6-07P, at 5. As was discussed in our meeting as well as in the Feasibility Study, areas of contaminated sediments are present both beneath and adjacent to support structures for the transportation infrastructure facilities that line both sides of the East Waterway. As a result, all feasibility study alternatives will necessarily leave behind contaminated sediments that cannot practicably be removed or contained beneath caps. The existence of this remaining contamination, which will be mixed in with new inputs due to vessel traffic and the hydrodynamics of the East Waterway, ensures that average Site-wide PCB, dioxin/furan, and arsenic concentrations equivalent to those of incoming materials will not be achieved in the foreseeable future.[1] Site-specific cleanup levels that do not consider this important characteristic of the East Waterway will simply not be achievable, and would create the same transparency and future cost risks as retaining natural-background-based cleanup levels. EPA has acknowledged that there are numerous technical challenges with developing achievable Site-specific cleanup levels, particularly the issue that "anthropogenic background" (per EPA guidance) would not account for contamination remaining within the East Waterway following active remediation, and therefore would yield cleanup levels that East Waterway sediments will not achieve.

**F. Additional process to obtain closure.** This would appear to require several decision documents, including the original Interim ROD, an explanation of significant differences ("ESD") or ROD amendment for adopting anthropogenic-background-based cleanup levels for PCBs, dioxins/furans, and arsenic, and then another amendment for dealing with the eventual non-attainment of those anthropogenic-background-based levels. The EWG does not see this as less process and more workable than using a final ROD from the start.

**G. Challenges for cost recovery and remedy implementation.** An interim ROD would present challenges to the EWG, if implementing the remedy, in seeking cost recovery from other PRPs. Parties that are not implementing the remedy would desire to cash out of the Site in exchange for paying a premium. However, uncertainty over future costs related to an interim remedy would force the implementing parties to request a cash-out premium that would appear exorbitant to the parties desiring to cash out, making

[1] The relatively low sedimentation rate in the East Waterway, combined with ongoing mixing of new sediments with contaminated sediments that cannot practicably be removed, will result in a very slow decrease in average PCB, dioxin/furan, and arsenic concentrations over an extremely long period of time following completion of the active remedy. Consequently, and in contrast to the Lower Duwamish Waterway, East Waterway sediments will not "go asymptotic" and equilibrate to concentrations very close to those in incoming sediments at any time in the foreseeable future. Maintaining active Superfund Program involvement into the latter part of the 21st century and beyond in order to discern whether average PCB concentrations, for example, reach a value chosen early in the 2020s would be unreasonable, and would also be contrary to multiple Superfund Task Force recommendations. That level of protracted involvement would add no value because all further decreases in concentration following completion of active cleanup will occur through source control work, which will occur under other federal and state programs.

settlements with those parties extremely difficult to obtain. This would leave the public EWG entities and any other implementing parties with the choice of either accepting greater risks or engaging in years of expensive and difficult litigation to obtain a fair financial contribution from non-implementing parties.

## II. EPA Option 2: A Final ROD that retains cleanup levels based on natural background

At the February 25, 2020, meeting, EPA stated that the option of issuing a final ROD that retains cleanup levels based on natural background, most notably the 2 µg/kg sediment natural background human health cleanup level for PCBs based on protection of human health (seafood consumption), is still under consideration. This option is essentially the same proposed approach that originally prompted our concerns over transparency, finality, and risk. Even if the natural-background-based cleanup levels were identified in the ROD as being subject to replacement once anthropogenic-background-based values are determined, the implementing parties would have no guarantee that a change would ever be made, or that replacement values would actually be achievable at the Site. As you acknowledged in our February meeting, the natural-background-based cleanup level for PCBs is unachievable in the East Waterway; this is also true for dioxins/furans and arsenic. Setting up the construct otherwise, even on a potentially temporary basis, would set unrealistic goals for the cleanup, would mislead the public, and would create an unacceptable degree of risk for the implementing parties.

A. **Future uncertainty.** We expect that EPA's proposed East Waterway remedy will represent all practicable active remedial actions that provide meaningful incremental reductions to risks to human health and the environment. Sediment cleanup levels set at natural background for PCBs, dioxins/furans, and arsenic are unachievable for the East Waterway, based on extensive EPA-required modeling grounded in empirical data. Adopting unachievable cleanup levels that have already been demonstrated to be unachievable creates many issues. Demonstrating in the future that natural-background-based levels cannot be achieved would require an open-ended re-evaluation of the Site by future EPA staff not party to these deliberations. And it would be up to that future EPA staff to determine what further remedial action may, in their view, be warranted.

B. **Perception that the cleanup will achieve natural background.** Adopting natural background as the cleanup level tells the public that that level is achievable. Not being transparent upfront with the public will create problems when the cleanup levels are revised later and the cleanup therefore looks like it failed. Without clear language in the ROD describing that the action is intended to be the final action and that no further action is expected, the public will still presume the remedy failed.

C. **Risk to public PRPs.** Similar to the concerns above regarding an interim ROD, a final ROD with unachievable cleanup levels presents risks that additional active remediation or other response actions will be required by future EPA staff, once anthropogenic cleanup levels are calculated by EPA and/or once it is eventually determined that those levels also cannot be met. The public entities that make up the EWG must consider the risk for potential for future work and our obligation to responsibly use public funds when deciding whether to implement this remedy as performing parties.

D. **Anthropogenic background levels cannot be achieved.** The same concerns articulated above regarding an interim ROD also apply to a situation where EPA would issue a final ROD with natural-background-based cleanup levels and later amend that ROD to select anthropogenic-background-based levels. Because (per EPA guidance) anthropogenic background could not include the contamination that will necessarily remain on site after active remediation, adoption of an anthropogenic-background-based level would merely replace one unachievable standard with another.

E. **Additional process to obtain closure.** This option would require several decision documents, including the original final ROD (with natural-background-based cleanup levels), an ESD or ROD amendment to adopt anthropogenic-background-based cleanup levels for PCBs, dioxins/furans, and arsenic, and then another amendment or ESD for dealing with the eventual non-attainment of anthropogenic-background-based levels. The EWG does not see this as less process and more workable than using a final ROD that either simply waives unachievable natural-background ARARs (without numeric replacement standards, which are not required), or adopts achievable cleanup levels that have already been determined to be the most probable long-term outcomes of a selected remedy that entails all practicable active remedial actions that provide meaningful incremental reductions to risks to human health and the environment—in the case of PCBs, 57 µg/kg; in the case of arsenic, 8.2 mg/kg; and in the case of dioxins/furans, 5.9 ng TEQ/kg. See Section 9.3 of the East Waterway Feasibility Study.

F. **Challenges for cost recovery and remedy implementation.** A final ROD that includes unachievable cleanup levels would present many of the same cost recovery challenges for the implementing parties as an interim ROD. The implementing parties will need to factor the risk of additional remediation being required into any cash-out negotiations with non-implementing PRPs, making settlements difficult to obtain and forcing implementing parties to bear additional costs and risk.

# 2020-4-23 EWG Letter to EPA-final with attachments

Final Audit Report 2020-04-23

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